

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Previously Presented) A method for strengthening the structure of a protein- containing food product during a pasteurization heat treatment of said product by forming disulfide bonds between the proteins to form a protein space network, the method comprising:

adding modified protein to said product before said heat treatment, which protein is modified by cleaving at least one disulfide bond originally present in said protein to obtain free sulfhydryl groups, and

heating said product for 15 minutes or less to cause an interchange reaction by said free sulfhydryl groups to form said structure strengthening disulfide bridges between proteins.

2. (Currently Amended) The method of claim 1, wherein said heating time is 15 seconds to 14 minutes, ~~preferably 1-10 minutes, more preferably 1-3 minutes.~~

3. (Currently Amended) The method of claim 1 wherein said heating temperature is 70-85 °C, ~~preferably 70-80 °C, more preferably 72-75 °C.~~

4. (Currently Amended) The method of claim 1 wherein said modified protein is produced ~~has been modified by contacting it-an unmodified protein with a sulfite ion forming reagent, such as alkali metal or earth alkali metal sulfite, hydrogen sulfite or metabisulfite or combinations thereof, to sulfonate said protein.~~

5. (Currently Amended) The method of claim 1 wherein the amount of free sulfhydryl groups in the total protein of the product before the interchange modification is 0.5-60 $\mu\text{mol/g}$ protein, ~~preferably 5-20 $\mu\text{mol/g}$ protein.~~

6. (Previously Presented) The method of claim 1 wherein said modified protein comprises whey protein or soy protein.

7. (Previously Presented) The method of claim 1 wherein said food product is yoghurt, pudding, spread, other milk product, dough, animal fodder or pet food.

8. (Previously Presented) A method for preparing a protein-containing food product having protective functional properties, the method comprising:

adding modified protein to said product, which protein is modified by cleaving at least one disulfide bond originally present in said protein to obtain free sulfhydryl groups, and

heating said product for 15 minutes or less to cause an interchange reaction by said free sulfhydryl groups to further cleave other disulfide bridges between proteins to obtain free sulfhydryl groups providing said functional properties.

9. (Currently Amended) The method of claim 8, wherein said heating time is 15 seconds to 14 minutes, ~~preferably 1-10 minutes, more preferably 1-3 minutes.~~

10. (Currently Amended) The method of claim 8 wherein said heating temperature is 70-85 °C, ~~preferably 70-80 °C, more preferably 72-75 °C.~~

11. (Currently Amended) A protein-containing food product comprising a protein space network strengthening the structure of said product, which network is formed by adding a modified protein to the protein-containing food product and heating ~~for formed in a pasteurization heat treatment by disulfide bonds between proteins,~~ wherein ~~said protein network has been created by adding modified protein to the product before said heat treatment, which protein is modified by cleaving at least one disulfide bond originally present in said protein to obtain free sulfhydryl groups which have formed said structure strengthening disulfide bonds in an interchange reaction during a heating of 15 minutes or less; wherein the modified protein is a whey protein or soy protein and has been modified by cleaving at least one disulfide bond originally present in the protein.~~

12. (Currently Amended) The protein-containing product of claim 11, wherein said heating time is 15 seconds to 14 minutes, ~~preferably 1-10 minutes, more preferably 1-3 minutes.~~

13. (Currently Amended) The protein-containing product of claim 11 wherein said heating temperature is 70-85 °C, ~~preferably 70-80 °C, more preferably 72-75 °C.~~

14. (Currently Amended) The protein-containing product of claim 11 wherein said modified protein has been modified ~~is produced by contacting it an unmodified protein with a sulfite ion forming reagent, such as alkali metal or earth alkali metal sulfite, hydrogen sulfite or metabisulfite or combinations thereof, to sulfonate said protein.~~

15. (Previously Presented) The protein-containing product of claim 11 wherein the amount of free sulfhydryl groups in the total protein of the product before the interchange modification is 0.5-60, $\mu\text{mol/g}$ protein.

16. (Cancelled).

17. (Previously Presented) The protein-containing product of claim 11 wherein said food product is yoghurt, pudding, spread, other milk product, dough, animal fodder or pet food.

18. (Currently Amended) A protein-containing food product having protective functional properties, wherein said product comprises free sulfhydryl groups created by:
adding modified protein to the protein-containing food product, the modified protein being a whey protein or soy protein which has been ~~before pasteurization heat treatment, which protein is modified~~ by cleaving at least one disulfide bond originally present in said protein[[,]] to obtain free sulfhydryl groups; and
heating the modified protein and protein-containing food product to further cleave other disulfide bonds between proteins during a heating of 15 minutes or less to obtain the protein-containing food product having protective free sulfhydryl groups ~~providing said functional properties.~~

19. (Currently Amended) The protein-containing product of claim 18 wherein said heating time is 15 seconds to 14 minutes, ~~preferably 1-10 minutes, more preferably 1-3 minutes.~~

20. (Currently Amended) The protein-containing product of claim 18 wherein said heating temperature is 70-85 °C, ~~preferably 70-80 °C, more preferably 72-75 °C.~~